IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Hideaki NARUSE et al.

Docket No.: Q77419

Appln. No.: 10/665,432

Group Art Unit: 1774

Confirmation No.: 6506

Examiner: Camie S Thompson

Filed: September 22, 2003

For: POLYMER COMPOSITION CONTAINING ORGANIC MODIFIED LAYERED SILICATE, FILM AND GAS BARRIER FILM AS WELL AS SUBSTRATE AND IMAGE DISPLAY DEVICE USING THEM

DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks,
Washington, D.C. 20231

Sir:

I, Hideaki NARUSE, a Japanese citizen, having a post office address of c/o Fuji Photo Film Co., Ltd., No.210, Nakanuma Minami-ashigara-shi, Kanagawa 250-0193 Japan, hereby declare and state that I received a Master's Degree from Shizuoka University, Graduate School of Science and Engineering, Course of Chemical Systems Engineering in March of 1984, and I was employed by Fuji Photo Film Co., Ltd. in April of 1984 and since that time to May of 1995 I had been principally engaged in research and development of application methods of materials for photosensitive products such as couplers and anti-fading agents in Ashigara Research Laboratories of said company. I also declare and state that since June of 1995 to December of 2002 I had been principally engaged in research and

development of color photothermographic materials and since January of 2002 4/28/2005. H.N. ~~2003~~ I have been principally engaged in research and development of barrier films for electronic devices. My present position is a ~~Chief~~ Manager 4/28/2005. H.N. ~~Researcher~~ of Advanced Core Technology Laboratories.

I declare further that I am the inventor of the subject matter of the claims in the above-identified application and I have read all of the documents contained in the file wrapper of the above-entitled application.

I declare further that the test described below was conducted at my direction and under my supervision and the test results are true and correct to the best of my knowledge.

EXPERIMENT AND RESULTS

Organic Modified Layered Silicate A was prepared in the manner set forth in Example 1 of Kawasumi et al., U.S. Patent No. 4,810,734 except that 10-aminodecanoic acid was used in place of 12-aminododecanoic acid.

Organic Modified Layered Silicate B was prepared in the manner set forth in Example 1 of Kawasumi et al., U.S. Patent No. 4,810,734 except that N-hexadecanyl-4-methylpyiridium bromide was used in place of 12-aminododecanoic acid.

Somasif MTE produced by Co-op Chemical was used as Organic Modified Layered Silicate C.

Organic Modified Layered Silicate D was prepared by using octadecyltrimetylammonium bromide in the manner set forth in page 7, lines 26-33 of U.S. Ser. No. 10/606,236.

Organic Modified Layered Silicate E was prepared by using dioleyldimethylammonium bromide in the manner set forth in page 7, lines 26-33 of U.S. Ser. No. 10/606,236.

Decomposition starting temperatures of Organic Modified Layered

Silicates A-E were measured by the method described in the present specification (see page 9, line 29 to page 10, line 1). The results were shown below.

Organic Modified Layered Silicate	Decomposition Starting Temperature (℃)
A (10-Aminodecanoic acid)	190
B (N-hexadecanyl-4-methylpyiridium bromide)	190
C (Somasif MTE)	182
D (Octadecyltrimetylammonium bromide)	185
E (Dioleyldimethylammonium bromide)	191

DISCUSSION

The above table clearly indicates that Organic Modified Layered Silicates A-E produced by the suggestions of U.S. Patent No. 4,810,734 and U.S. Ser. No. 10/606,236 have a decomposition starting temperature of 191 ℃ or lower, that is out of the claimed range (250 to 350 ℃).

The organic modified layered silicate of Example 1 in U.S. Patent No. 4,810,734 differs from Organic Modified Layered Silicate A in the fact that the former uses 12-aminododecanoic acid and the latter uses 10-aminodecanoic acid. Chemical structure of these compounds are very similar to each other and it is reasonably expected that these two organic modified layered silicates have the almost same decomposition starting temperature, i,e, the decomposition temperature of Example 1 in U.S. Patent No. 4,810,734 is out of the claimed range.

The low decomposition temperatures of Organic Modified Layered

Silicates B, D and E indicate that use of alkylammonium compounds does not produce an organic modified layered silicate having such a high decomposition temperature as claimed in the present application. This indicates that the exemplified organic modified layered silicate in Example 3 of U.S. Patent No. 4,810,734 has a decomposition temperature out of the claimed range.

Thus, U.S. Patent No. 4,810,734 fails to disclose the claimed organic modified layered silicates having a decomposition temperature of 250 to 350 ℃ and therefore the claimed invention is not anticipated by U.S. Patent No. 4,810,734.

U.S. Ser. No. 10/606,236 discloses Somasif MTE in Example 1, that is a sole exemplified organic modified layered silicate. The above table clearly shows that the decomposition temperature of Somasif MTE is far lower than the lower limit of the claimed range. U.S. Ser. No. 10/606,236 suggests use of alkylammonium ions such as octadecyltrimetylammonium ion and dioleyldimethylammonium ion to produce organic modified layered silicates. However, the experimental results above indicate that the produced silicates fail to have the claimed decomposition temperature (see particularly Organic Modified Layered Silicates D and E). Thus, the claimed organic modified layered silicates can not be produced on the basis of the suggestions of U.S. Ser. No. 10/606,236 and therefore the claimed invention is not obvious over U.S. Ser. No. 10/606,236.

As described in page 10, lines 2-5, conventional organic modified layered silicates have a lower decomposition starting temperature than the claimed range. The organic modified layered silicates exemplified in U.S. Patent No. 4,810,734 and U.S. Ser. No. 10/606,236 do not have the claimed decomposition temperature and these documents fail to suggest the method for achieving the claimed high decomposition temperature. I trust that the claimed invention is patentable.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Dated this 28 day of April 2005.

Hideaki Naruse

Hideaki NARUSE